

Anti- Ge2 Antibodies

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Overview

- Case Study – patient for surgery
- Positive panel- refer to NHSBT
- Liaising with clinicians
- Conclusion

Background

- Patient with no history arrives at Kings (surgical), G&S sample sent for “?theatre”
- Group is B RhD Positive, 3 cell screen all positive, panel positive, auto is negative.

Results

Sample Valid Until: 12/10/2016 15:30		...	Not EXm Eligible
pA Order Comms Request	Sample testing completed.		
pA Blood Group	B Rh D POSITIVE		
pB Antibody Report	Pan reactive. Sent to reference laboratory for antibody confirmation		
pB			
nA Automated Full Group Reactions			
pA Anti A	-		
pA Anti B	4		
pA Anti D1	3		
pA Rh Control	-		
pA A Cell	4		
pA B Cell	-		
pA Antibody Screen	POSITIVE		
pA Ab Screen 1	2		
pA Ab Screen 2	2		
pA Ab Screen 3	2		
pA Antibody Identification	:		
pA	[PANEL] 1. PANEL 1 R1433360	13/10/2016	
pA	[ABODS]		
pA	[CELLS]	1 2 3 4 5 6 7 8 9 10 11	
pA	[RESLT] IAT	2 2 2 2 2 2 2 2 2 2	
pA Ab Panel Required (Y/N)	Y		
tE Rh (Rh) Phenotype			
pE Anti C	+		
pE Anti c	-		
pE Anti E	-		
pE Anti e	+		
pE Anti K	-		
pE Control	-		
pE Most Probable Rh Genotype	R1R1(C+D+E-c-e+)		
pE	Patient is K (Kell) Antigen NEGATIVE		
nA Special Requirements			
nA	K-		

Crossmatch results

Episode 1 of 1: 05/10/2016 15:19

Products : REDCELL x 2

Required : 06/10/2016 08:00

Reason : Small bowel obstruction

Details	Unit	Product	Group	Status	Date
	Auto			*AUTO*	07/10/2016
		IAT (-)			
	G052516724316Y	RC	O Rh D POSITIVE	RETURNED TO STOC	08/10/2016
	NOT FOR ISSUE	IAT (2)			
	G072416331644K	RC	O Rh D POSITIVE	RETURNED TO STOC	08/10/2016
	NOT FOR ISSUE	IAT (2)			
	G072416337092U	RC	O Rh D POSITIVE	RETURNED TO STOC	09/10/2016
	NOT CHECKED	IAT ()			
	G073516195303Q	RC	O Rh D POSITIVE	RETURNED TO STOC	06/10/2016
	NOT CHECKED	IAT ()			

As patient was for surgery, units set up for crossmatch.
The first two units were not used!


After core hours one weekday evening...

- Surgical ward called lab:
- Patient was going to theatre that evening
- 2 units of red cells would be required.
- Lab unable to provide crossmatched blood until NBS report was back...

Options

- BMS does not want responsibility of giving out unsafe units (?pan reactive auto , ?underlying alloantibody)
- Can surgery wait until tomorrow when report back?
- Cell Salvage?
- Concessionary release- doctor takes responsibility
- BMS attempts to buy more time!!

RCI to the rescue...

Doctor: HAQ Mr A Clinical Details:	Source: Katherine Monk Phoned by:	Therapy:	Date received: 05/10/2016
Status: Printed	Flags		Demographics: Verified
pL Red Cell Immunology tL RCI Atypical Antibodies pL Atypical Red Cell Antibodies pL pL pL pL pL nA Special Requirements	Atypical Red Cell Antibodies NHSBT No. 5513352320 Anti-Ge2 detected. This antibody is unlikely to be clinically significant but may cause problems cross-matching by IAT. Select ABO, D and K compatible red cell units for crossmatching by IAT and select those that are least incompatible.		
Episode 1 of 1: 05/10/2016 21:19 Products : REDCELL x 2 Required : 06/10/2016 08:00 Reason : Hemi-Colectomy			

- Excellent! Report back. But hang on a minute... what is anti- Ge_2 ??????

Anti-Ge2

- Anti- Ge2 is part of the Gerbich family of antibodies.
- OMIM states: Gerbich (anti-Ge2, Ge3) has been known to cause a haemolytic transfusion reaction
- People with Gerbich negative red cells more likely to exhibit elliptocytosis
- Gerbich antigens act as receptors for Plasmodium falciparum

Liaising with clinicians

- Phoned clinician with Ge2 report for this patient
- Explained this was an unusual antibody
- Explained some crossmatched units were incompatible
- Think this may have put them off surgery, until...

Fast forward 1 week and a hemicolectomy...

- Blood required on a more urgent basis this time.
- Samples had to be referred to RCI again to get a valid report to issue crossmatched units

pA Order Comms Request	Sample testing completed.
pA Blood Group	B Rh D POSITIVE
pB Antibody Report	Patinet known with Anti-Ge2, sample sent to NBS
nA Automated Full Group Reactions	
pA Anti A	-
pA Anti B	4
pA Anti D1	4
pA Rh Control	-
pA A Cell	4
pA B Cell	-
pA Antibody Screen	POSITIVE
pA Ab Screen 1	2
pA Ab Screen 2	2
pA Ab Screen 3	2
pA Antibody Identification	:
pA [PANEL] 1. PANEL 1 R1433360	13/10/2016
pA [ABODS]	Patinet known with anti-Ge2, sample sent to N
pA [CELLS]	1 2 3 4 5 6 7 8 9 1011
pA [RESLT] IAT	2 2 2 2 2 2 2 2 2 1
pA Ab Panel Required (Y/N)	Y
pL Red Cell Immunology	Atypical Red Cell Antibodies
tL RCI Atypical Antibodies	
pL Atypical Red Cell Antibodies	Allo anti-Ge2 detected by IAT. This antibody is
pL	unlikely to be clinically significant but may
pL	cause problems cross-matching by IAT. No
pL	additional alloantibodies were identified by LISS
pL	tube. Select ABO and D compatible E- c- K- red
pL	cell units for cross-matching by IAT.
pA Special Requirements	E-
pA	C-
pA	K-
pA Ward Issue Summary	

NHSBT to the rescue...

- Patients Rh/K requirements: c-E-K- limited stock of potential units on site
- Again liaise with NHSBT - this time hospital services- to source suitable units for crossmatch to provide enough blood for patient

Finally

- Units were issued and the patient did recover
- Thankfully no transfusion reactions were reported

Learning Points

- Communication between lab staff with clinicians and NHSBT is key to work as a team for the benefit of the patient
- non clinically significant antibodies can still cause problems in supplying blood to the patient in a timely manner

Thoughts and Questions?